



INVESTIGATOR'S ANNUAL REPORT

United States Department of the Interior
National Park Service

All or some of the information you provide may become available to the public.

OMB # (1024-0236)
Exp. Date (11/30/2010)
Form No. (10-226)

Reporting Year: 2008	Park: Shenandoah NP	Select the type of permit this report addresses: Scientific Study										
Name of principal investigator or responsible official: Ami Riscassi		Office Phone: 434-982-2616										
Mailing address: University of Virginia Clark Hall 291 McCormick Road Charlottesville, VA 22904 USA		Office FAX 434-924-4761 Office Email alr8m@virginia.edu										
Additional investigators or key field assistants (first name, last name, office phone, office email) <table><tr><td>Name: Amber Converse</td><td>Phone: (434) 982-2616</td><td>Email: adc9x@virginia.edu</td></tr><tr><td>Name: Kelly Hokanson</td><td>Phone: (757) 374-2702</td><td>Email: kjh5r@virginia.edu</td></tr><tr><td>Name: Todd Scanlon</td><td>Phone: (434) 924-3382</td><td>Email: tms2v@virginia.edu</td></tr></table>				Name: Amber Converse	Phone: (434) 982-2616	Email: adc9x@virginia.edu	Name: Kelly Hokanson	Phone: (757) 374-2702	Email: kjh5r@virginia.edu	Name: Todd Scanlon	Phone: (434) 924-3382	Email: tms2v@virginia.edu
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Project Title (maximum 300 characters): Controls on mercury dynamics during storm events within mid-Appalachian forested headwater catchments: interactions with organic carbon												
Park-assigned Study or Activity #: SHEN-00359	Park-assigned Permit #: SHEN-2008-SCI-0021	Permit Start Date: Nov 05, 2008	Permit Expiration Date: Sep 30, 2010									
Scientific Study Starting Date: Nov 05, 2008		Estimated Scientific Study Ending Date: Sep 30, 2010										
For either a Scientific Study or a Science Education Activity, the status is: Continuing		For a Scientific Study that is completed, please check each of the following that applies: <input type="checkbox"/> A final report has been provided to the park or will be provided to the park within the next two years <input type="checkbox"/> Copies of field notes, data files, photos, or other study records, as agreed, have been provided to the park <input type="checkbox"/> All collected and retained specimens have been cataloged into the NPS catalog system and NPS has processed loan agreements as needed										
Activity Type: Research												
Subject/Discipline: Water Quality												

Purpose of Scientific Study or Science Education Activity during the reporting year (maximum 4000 characters):

This proposed research will investigate the physical and chemical controls on mercury (Hg) transport within catchments in Shenandoah National Park. A majority of Hg is transported downstream during high-flow events, and its mobility and toxicity have been shown to be coupled with organic carbon (OC). Understanding factors regulating Hg transport and interactions with OC is essential to assess the downstream fate of Hg and address concerns about current and future contamination. The main objectives of the project are: (1) to quantify particulate and dissolved Hg and OC fluxes in stream water during storm-events and investigate Hg-OC

dynamics, and (2) to quantify particulate and dissolved Hg and OC fluxes in stream water during baseflow and investigate Hg-OC dynamics. The ultimate goal is to further the understanding of Hg dynamics within the greater scientific community, as well as to provide important information about Hg controls in this region. SHEN resource management officials may use our findings to determining the most effective Hg sampling protocol as well as to determine the relevant concerns to downstream waters.

Findings and status of Scientific Study or accomplishments of Science Education Activity during the reporting year (maximum 4000 characters):

Automatic water samplers were installed at Paine Run, Piney River, and Staunton River. The samplers are located within the housing already present for the Shenandoah Watershed Study sampling. The only visible difference at the sites is a second intake (or hose) running from the shed to the river. No samples were collected this reporting year.

For Scientific Studies (not Science Education Activities), were any specimens collected and removed from the park but not destroyed during analysis?

No

Funding specifically used in this park this reporting year that was provided by NPS (enter dollar amount):

\$0

Funding specifically used in this park this reporting year that was provided by all other sources (enter dollar amount):

\$2500

List any other U.S. Government Agencies supporting this study or activity and the funding each provided this reporting year:

Paperwork Reduction Act Statement: A federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. Public reporting for this collection of information is estimated to average 1.625 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the forms. Direct comments regarding this burden estimate or any aspect of this form to Dr. John G. Dennis, Natural Resources (3127 MIB), National Park Service, 1849 C Street, N.W., Washington, DC 20240.